AIR QUALITY FORECASTS AND ADVISORIES

Community Advisory Council
June 28, 2019

NOACA

Lake
Geauga
Cuyahoga
Lorain
Medina

Planning For
GREATER
CLEVELAND

ACTION REQUESTED

No action requested. This item is for presentation and discussion.

- **Air quality forecast accuracy (through May 31)**

PREVIOUS ACTION

No Prior Action (Quarterly Update for Air Quality Subcommittee)

BACKGROUND

NOACA forecasts daily peak eight-hour ground-level ozone concentrations and fine particulate matter concentrations.

- In 2019, daily forecasts for ozone began March 1 and will conclude October 31
- Daily forecasts for fine particulate matter are year-round

NOACA posts daily air quality forecasts through AirNowTech, in affiliation with the United States Environmental Protection Agency (U.S. EPA)

BACKGROUND

NOACA ground-level ozone and fine particulate matter forecasts based on a review of several meteorological variables and model guidance.

- National Oceanic & Atmospheric Administration (NOAA) National Air Quality Forecast Capability (ozone only).
- Classification and Regression Tree (CART) Model
- Sonoma Tech Guidance (via Columbus/Central Ohio Forecast on AirNow.gov)

5-15

BACKGROUND

Anticipation of Exceedance

- Consult Forecast Discussion Group (FDR) the morning before anticipated exceedance
- Decide based on meteorological forecast, model forecasts and FDR input (no later than 2PM)
- Prepare advisory and press release
  - Constant Contact
  - Social Media
- Notify partners
  - Ohio Department of Transportation (ODOT) Office of Highways (Dynamic Message Signs)
  - National Weather Service (NWSChat and National Weather Alerts Map)
- NOACA External Engagement and Public Affairs staff field media inquiries

BACKGROUND
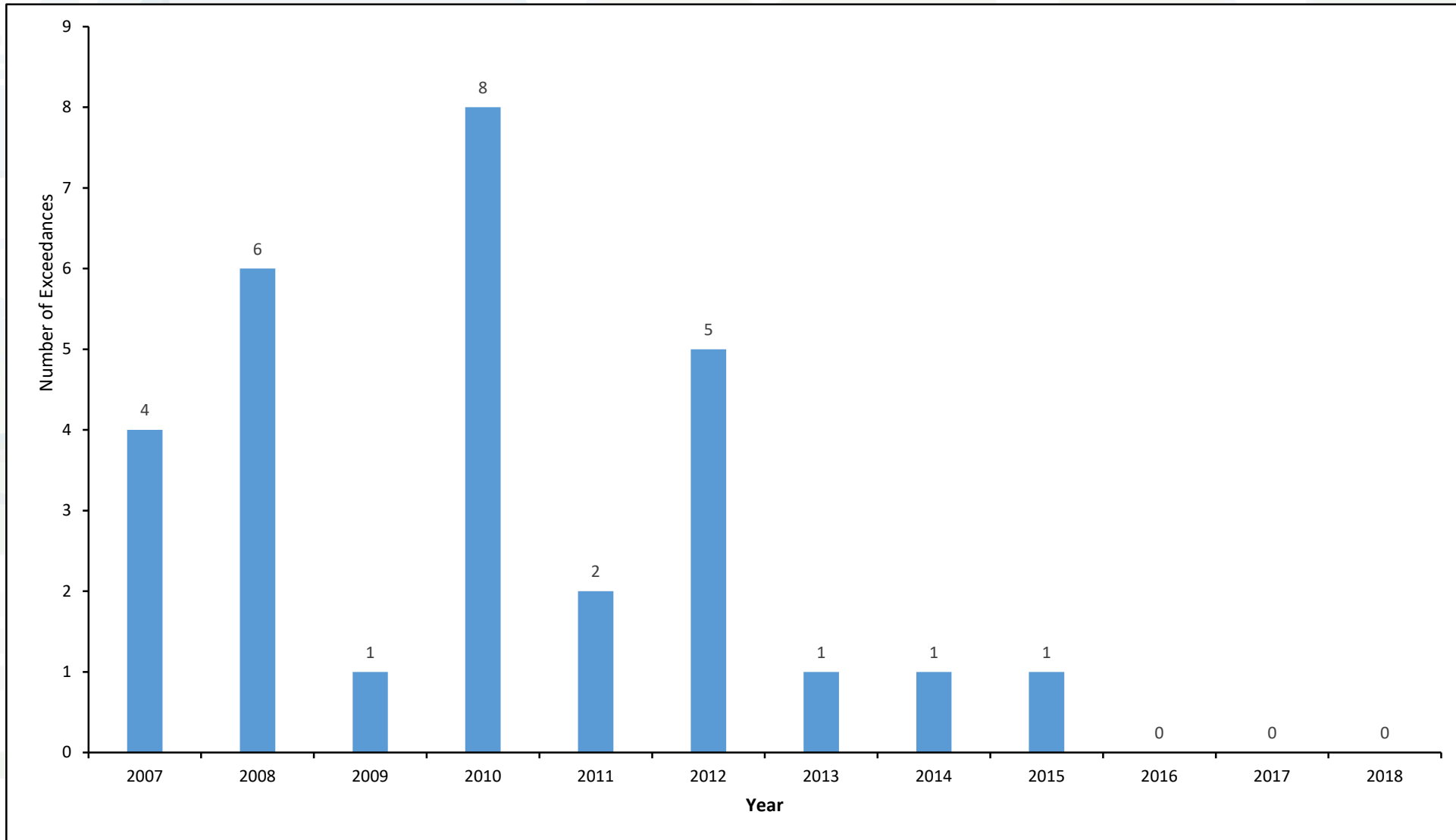
NOACA Forecast Performance for 2019 (PM$_{2.5}$):

PM$_{2.5}$ GOOD/MODERATE THRESHOLD (12 µg/m^3)		NOACA FORECAST	
		BELOW	ABOVE
OBSERVED	BELOW	39%	18%
	ABOVE	14%	29%
CORRECT = 68%			

BACKGROUND

NOACA Forecast Performance for 2019 ($PM_{2.5}$):

$PM_{2.5}$ MODERATE/UNHEALTHY THRESHOLD (35 µg/m^3)		NOACA FORECAST	
		BELOW	ABOVE
OBSERVED	BELOW	100%	0%
	ABOVE	0%	0%
CORRECT = 100%			

BACKGROUND

BACKGROUND

NOACA and NOAA Forecast Performance for 2019 (March 1-May 31) (O_3):

FORECAST		THRESHOLD	
		50ppb	70ppb
AGENCY	NOACA	85%	100%
	NOAA (6Z/12Z)	(89/89)%	(100/100)%

BACKGROUND
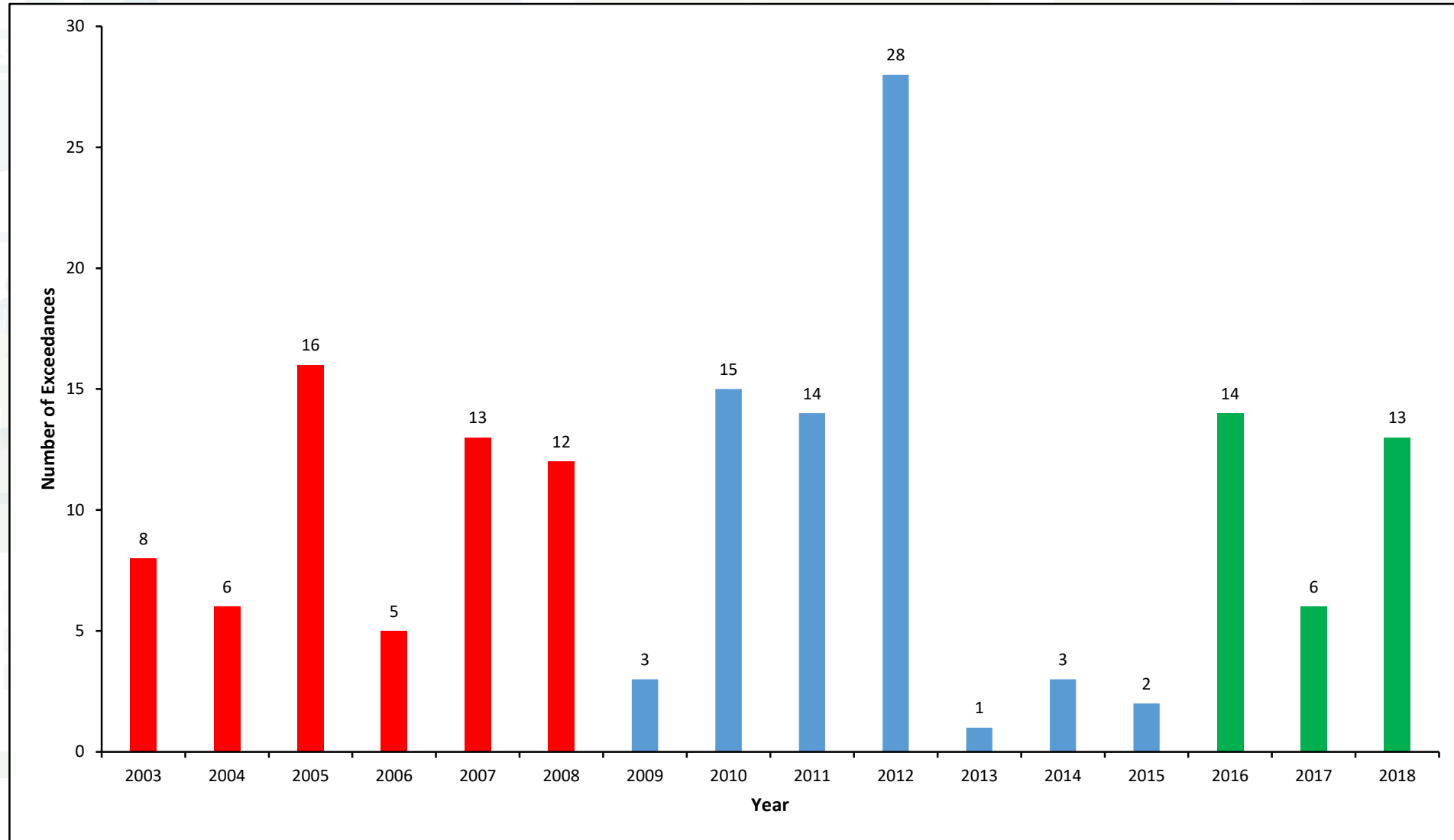
NEXT STEPS

- Track forecast performance of NOACA and NOAA for ozone; NOACA only for fine particulate matter
- Collaborate with NOAA personnel to report model performance in Northeast Ohio
- Update subcommittees and advisory councils as necessary

NOACA
Lake
Geauga
Cuyahoga
Lorain
Medina
Planning For
GREATER CLEVELAND